Section 2.11 Water Resources

12-month Issues

12-WR-1 **Data Adequacy Deficiency** – Please submit a thorough discussion on the specific current and foreseeable future cumulative impacts related to water supply, wastewater discharge, and stormwater runoff.

The applicant intends to discharge sanitary wastewater to the City of San Joaquin's Wastewater Treatment Facility. However, the applicant further indicates, via the CVRWQCB, that currently, no new sources of wastewater connection are permitted due to insufficient capacity at the existing WTF. Please provide staff with the "Comment letter to Initial Study" by the CVRWQCB. Please also provide a discussion on how the applicant would mitigate impacts related to sanitary wastewater issues in lieu of discharging to the City of San Joaquin.

Data Adequacy Response –As noted in Section 7.0 of the AFC, the project would use water from the City of San Joaquin, discharge sanitary wastewater to the City and would hold stormwater on-site.

According to the City's General Plan, growth will occur in all areas of the City and within the City's sphere of influence. The City intends to annex areas within its sphere of influence within the next 20 years and has reserved land use designation that can be converted to urbanized uses based on population demands. The General Plan projects a 3 percent growth rate in population, but there are no significant residential or industrial developments planned, other than CVEC. The City of San Joaquin currently has the following buildings under construction:

- Gift Store (7,500 square-foot parcel)
- Auto Parts Shop (9,560 square-foot parcel)
- Storage Facility (11,250 square-foot parcel)
- Potential expansion of San Joaquin Health Center (undetermined size).

In addition to the commercial uses listed above, the City has approximately 55 housing units proposed or under construction citywide.

Growth in Fresno County is to occur in urbanized areas, incorporated and unincorporated cities where infrastructure services are available. A search of the Fresno Bee did not produce additional results on reports for community development in the project vicinity.

With respect to water supply, the City projected a growth rate of 2.8.3 percent, with the population expected to grow from 2,781 in 1994 to 3,374. The City has a plan to bring 3 additional wells into production as they are needed, and at this

time has excess production capacity. During operation, the plant would support an additional 30 employees, which added to the 3,374 and estimated 2.8 percent growth rate are not significant according to the City (Horne, 2001). In addition to the strategy the City has for absorbing additional demands, the general trend in the region is for retiring agricultural lands as drainage becomes a wider problem. This will likely have the effect of more people moving from San Joaquin to Fresno and other urban centers reducing water demands in San Joaquin.

With respect to sanitary wastewater discharges, on page 8.14-9 of the AFC the Applicant acknowledges that the City of San Joaquin WWTF is currently operating at or above capacity, and that the City expects to have expanded capacity in place by January 2002. It notes that no connections would be permitted until that expanded capacity is in place. The CVEC expects to be operational no earlier than 2004. If for some reason the City's capacity were not available by then, the CVEC could use a number of on-site disposal methods for sanitary wastewater including on-site septic system, on-site vault toilets, or portable vault systems, depending on how long the capacity was expected to be limited. Given the kinds of development that are anticipated, the capacity of the wastewater system will not be adversely affected (after expansion) by accomodating all foreseeable growth and the sanitary waste from the CVEC.

With respect to stormwater, San Joaquin is located in an arid portion of the south San Joaquin Valley, where rainwater generally percolates quickly through sandy soils in winter, and evaporates quickly in summer. As a result the local practice for stormwater management is to divert surface water to retention basins, from which it either percolates or evaporates. The CVEC plans to have an on-site basin to capture nearly all on-site stormwater. The only off-site flows would be sheet flow near adjacent roads or edges not adequately captured by the on-site system. For these flows, the rate of percolation into groundwater will probably avoid any off-site flows. The City conveys most stormwater to retention basins located approximately 1 mile north of the CVEC site.

12-WR-2 **Data Adequacy Deficiency –** Provide a letter from the CVRWQCB that discusses the upcoming changes to the Waste Discharge Requirements between the Regional Board and the City of Fresno regarding the Master Reclamation Permit and how this will affect the proposed CVEC project. Provide documentation regarding the impending changes related to schedule and documentation from the RWQCB citing any waivers issued to the City of Fresno allowing the applicant to use reclaimed water until the WDRs from the City of Fresno are adopted.

Data Adequacy Response – A letter from CVRWQCB, dated 21 November 2001, is provided here as Attachment 12-WR-2.

12-WR-3 **Data Adequacy Deficiency –** Provide a hydrostratigraphic map that depicts the areas affected by groundwater withdrawal for reclaimed water supply.

Data Adequacy Response – Cooling water supply for the CVEC will be obtained by extracting groundwater from the groundwater mound beneath the reclamation basins of the Fresno-Clovis Regional Wastewater Treatment Plant. The general direction of regional groundwater flow is towards the southwest (Figure 7.1-1a). Infiltration from the reclamation basins locally modifies the direction of regional groundwater flow, as seen on Figure 7.1-1a. Figure 7.1-1b presents a more localized evaluation of the groundwater mound beneath the reclamation basins. Figures 7.1-1a and 7.1-1b (attached) were both prepared with data collected during the Spring of 2000.

The hydrostratigraphy of the area in the immediate vicinity of the mound is characterized by coarse-grained material (sand, gravel, and clayey sand) separated by discontinuous intervals of finer-grained material (silt and clay). Figures 7.1-1c, 7.1-1d, and 7.1-1e (attached) show the interpreted hydrostratigraphy.

12-WR-4 **Data Adequacy Deficiency –** Provide legible mapping (suggested scale less than 1"=100') that reflects existing and conceptual proposed contours for the proposed power plant site. This mapping should include legible contours for the proposed swales, ditches, and the detention basin.

Data Adequacy Response – A more detailed figure showing the conceptual contours, swales ditches and detention basin is attached here as Figure 8.14-4R.

12-WR-5 **Data Adequacy Deficiency –** Provide a topographic map that depicts the linear facilities. This topographic map should also contain legible topography for all watercourses to be impacted by the proposed project.

Data Adequacy Response – At the time the AFC was filed, CVEC provided CEC staff with 1:24,000 topographic coverage of all project linears under separate cover. The existing topography is flat, with abrupt banks on both sides of irrigation canals, laterals, the James Bypass, and Fresno Slough.

12-WR-6 **Data Adequacy Deficiency –** Please modify Figure 8.14-3 to include water inundation zones (i.e. 100 – year floodplain) for all watercourses affected by lineal crossings.

Data Adequacy Response – Figures 8.14-3a and b showing the 100-year FEMA-defined floodplains along the project linears are attached here to supplement the figure in the AFC. Because the linear pipe facilities will be buried there will be no significant change in surface topography or volume that would affect the capacity of location of the 100-year floodplain.

12-WR-7 **Data Adequacy Deficiency –** Please provide letters from the City of Fresno and the State Department of Health Services (DHS) regarding the Title 22 Engineering Report submitted by the City of Fresno. This report was drafted for the Calpine reclamation project.

Provide the October 17, 2001 and October 23, 2001 letters from the DHS and City of Fresno, respectively.

Data Adequacy Response –These letters are attached to this response as Attachment 12-WR-7.

12-WR-8 **Data Adequacy Deficiency –** Section 8.14.3.4 incorrectly references Table 7.1-1 as depicting the CVEC monthly water requirements. Please provide the appropriate table.

Data Adequacy Response – A previous draft contained a table of monthly requirements at this location. However, upon review of the CEC data adequacy data sheets, the table was replaced with one showing maximum daily and annual requirements. The correct statement should be:

"The estimated daily and annual water requirements for the project are shown in Table 7.0-1."

The correct reference is to Table 7.0-1

12-WR-9 **Data Adequacy Deficiency –** Table 2.2-1 is titled "Estimated Average Daily Water Requirements"; however the table contents are labeled as Peak Requirements. Please provide further clarification.

Data Adequacy Response – The table heading is labeled incorrectly. In the body of the table, the value pertaining to ambient temperature (61°F) is the average value, while that associated with 100°F is the peak usage. Therefore:

5,342 afy (3,321 gpm) is "Average"

7,000 afy (6,455 gpm) is "Peak"

12-WR-10 **Data Adequacy Deficiency –** What will serve as the source of water for the construction phase of the project? Please provide additional information.

Data Adequacy Response –It is typical in linear construction to require the construction contractor to enter an appropriate and convenient contract for construction water, and this is not normally designated by the Applicant. This is especially true where the linears are extensive as they are in this project and the construction contractor does not want to haul water long distances. A very typical arrangement is for the construction contractor to buy water from local farmers, or urban municipalities if present. The City of San Joaquin is willing and prepared to provide water for construction, but this would involve trucking water in some cases up to 20 miles from the City to the construction area. James Irrigation District distributes water throughout the area east of San Joaquin has dozens of canals throughout the area and is another likely purveyor. However, if CVEC, LLC does not wish to limit the flexibility of the construction contractor to use existing relationships, infrastructure or agreements to obtain the necessary water where they desire it. CVEC, LLC has agreements that all construction water would be provided by the City if requested, but would like to reserve the opportunity for the construction contractor to negotiate and agreement with James Irrigation District or other local purveyor at their discretion.

12-WR-11 **Data Adequacy Deficiency –** Please provide complete and detailed drawings that exhibit all stormwater infrastructures associated with the proposed project (stormwater pipes / swales / ditch flow routes and discharge locations, inlets, oil / water separator locations).

Data Adequacy Response – A more detailed drawing showing the location of stormwater drainage, including oily water separators is attached to this response as Figure 8.14-4R.

12-WR-12 **Data Adequacy Deficiency –** Please elaborate on the fate of the stormwater runoff upon entering the proposed detention basin.

Data Adequacy Response – The project region is generally hot and dry, with sandy loam soils and deep groundwater. Typical stormwater facilities in the region are stormwater ponds with no outlet. Stormwater either evaporates or percolates into the soil, and none is discharged to other surface waters. According to the Bay Area Storm Water Management Agency, detention is the appropriate BMP to treat stormwater, so these ponds also allow sediment and adsorbed organics to settle out. The CVEC project was advised by the City of San Joaquin that one option would be to discharge stormwater to their basin, approximately ½ mile north of the project, but after consulting with the City, County and RWQCB, the Applicant determined that there was no advantage to discharging to an off-site stormwater basin. Therefore, CVEC proposes to discharge to an on-site stormwater basin.

12-WR-13 **Data Adequacy Deficiency –** Provide a discussion on the project linear facilities and their effects on the 100 – year floodplain.

Data Adequacy Response –The reclaimed water supply line and gas supply line will be buried and the surface restored to preconstruction contours. Therefore, they will have no effect on the capacity of the100-year floodplain. See also response to 12-WR-6.

12-WR-14 **Data Adequacy Deficiency –** Refer to Appendix B (h) (1) (A) and provide a discussion of conformity with LORS.

Data Adequacy Response —The LORS potentially applicable to the project are listed in Table 8.14-1 of the AFC. By listing these LORS, CVEC intends to conform and comply with these and all applicable LORS for the project.

6-month Issues

6-WR-1 **Data Adequacy Deficiency –** Provide a letter from the CVRWQCB that discusses the upcoming changes to the Waste Discharge Requirements between the Regional Board and the City of Fresno regarding the Master Reclamation Permit and how this will affect the proposed CVEC project. Provide documentation regarding the impending change related to schedule and documentation from the RWQCB citing any waivers issued to the City of Fresno allowing the applicant to use reclaimed water until the WDRs from the City of Fresno are adopted.

Data Adequacy Response – Please refer to the 21 November 2001 letter from the CVRWQCB that discusses the permitting of this project. It is provided as Attachment 12-WR-2.

6-WR-2 **Data Adequacy Deficiency –** Please refer to §2022(b)(1)(B).

Data Adequacy Response – The LORS potentially applicable to the project are listed in Table 8.14-1 of the AFC. By listing these LORS, CVEC intends to conform and comply with these and all applicable LORS for the project.

6-WR-3 **Data Adequacy Deficiency –** The applicant intends to discharge sanitary wastewater to the City of San Joaquin's Wastewater Treatment Facility. However, currently the WTF is experiencing an overload and the CVRWQCB is not permitting any new discharges to the WTF. Please provide staff with the "Comment letter to Initial Study" issued by the CVRWQCB. Please also provide a discussion on how the applicant would mitigate impacts related to sanitary wastewater issues in lieu of discharging to the City of San Joaquin.

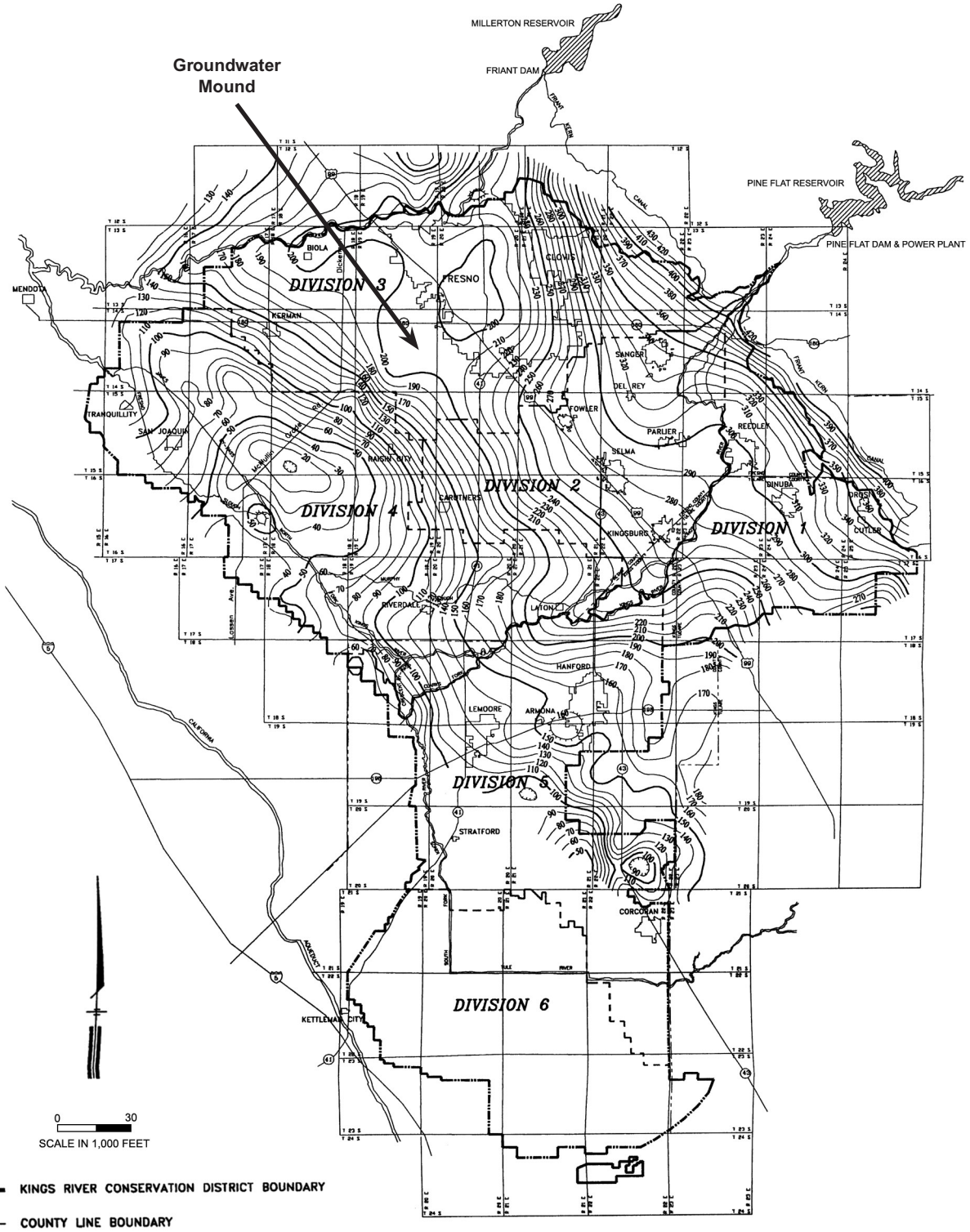
Data Adequacy Response – On page 8.14-9 of the AFC, the Applicant acknowledges that the City of San Joaquin WTF is currently operating at or above capacity, and that the City expects to have expanded capacity in place by January 2002 (see letter from Gary Horn, Attachment 6-WR-3). It notes that no connections would be permitted until that expanded capacity is in place. The CVEC expects to be operational no earlier than 2004. If for some reason the City's capacity were not available by then, the CVEC could use a number of on-site disposal methods for sanitary wastewater including on-site septic system, on-site vault toilets, or portable vault systems, depending on how long the capacity was expected to be limited.

6-WR-4 **Data Adequacy Deficiency –** The will serve letter from the City of San Joaquin (Appendix 7B) indicates that the City of San Joaquin will serve Domestic Sewer. However, the CVRWQCB is not permitting any new connections to the City's sewage system due to an overload.

Data Adequacy Response – See response to 6-WR-3.

6-WR-5 **Data Adequacy Deficiency –** Please provide written documentation from the RWQCB and the City of San Joaquin that further discusses the sanitary wastewater issue.

Data Adequacy Response – See response to 6-WR-3. The Applicant and RWQCB have no reason to believe expansion will not occur according to plan. However, in practical terms, if the expansion did not occur, CVEC would bear the cost of providing the necessary infrastructure to increase the capacity of the facility. CVEC is confident this is feasible because the necessary equipment consists of a single large pump.

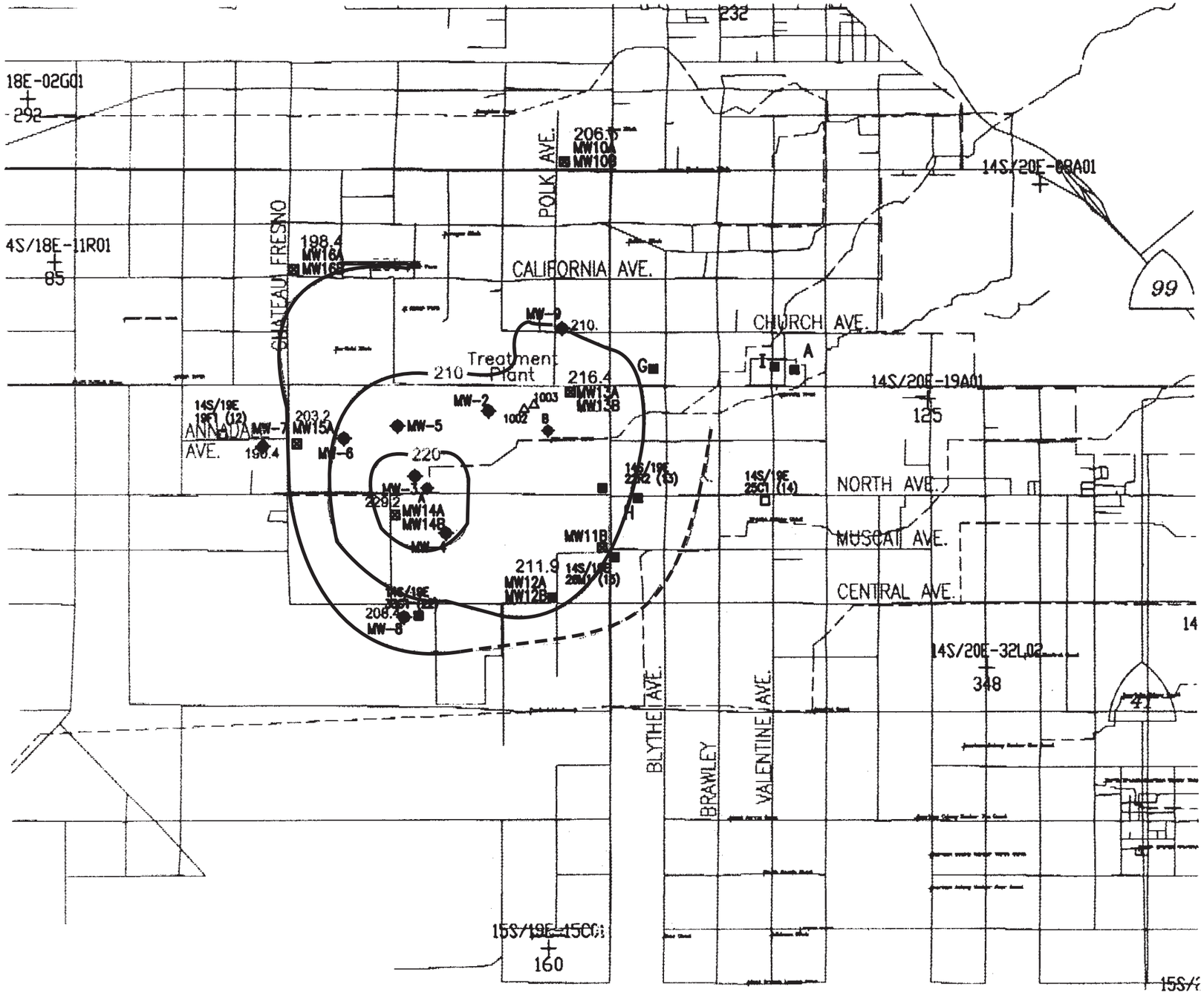


From

Kings River Conservation District
Annual Groundwater Report
May 2001

Figure 7.1-1a
Groundwater Surface Elevations
Spring 2000

CH2MHILL



LEGEND

- Ditches/Canals
- MW13A / MW13B — POC and Background Well Locations
- Plant Wells
- Observation Wells
- Monitoring Wells
- Ag Wells
- Domestic Wells
- Contours of Equal Ground-Water Surface Elevation (feet, MSL), Dashed Where Appropiate

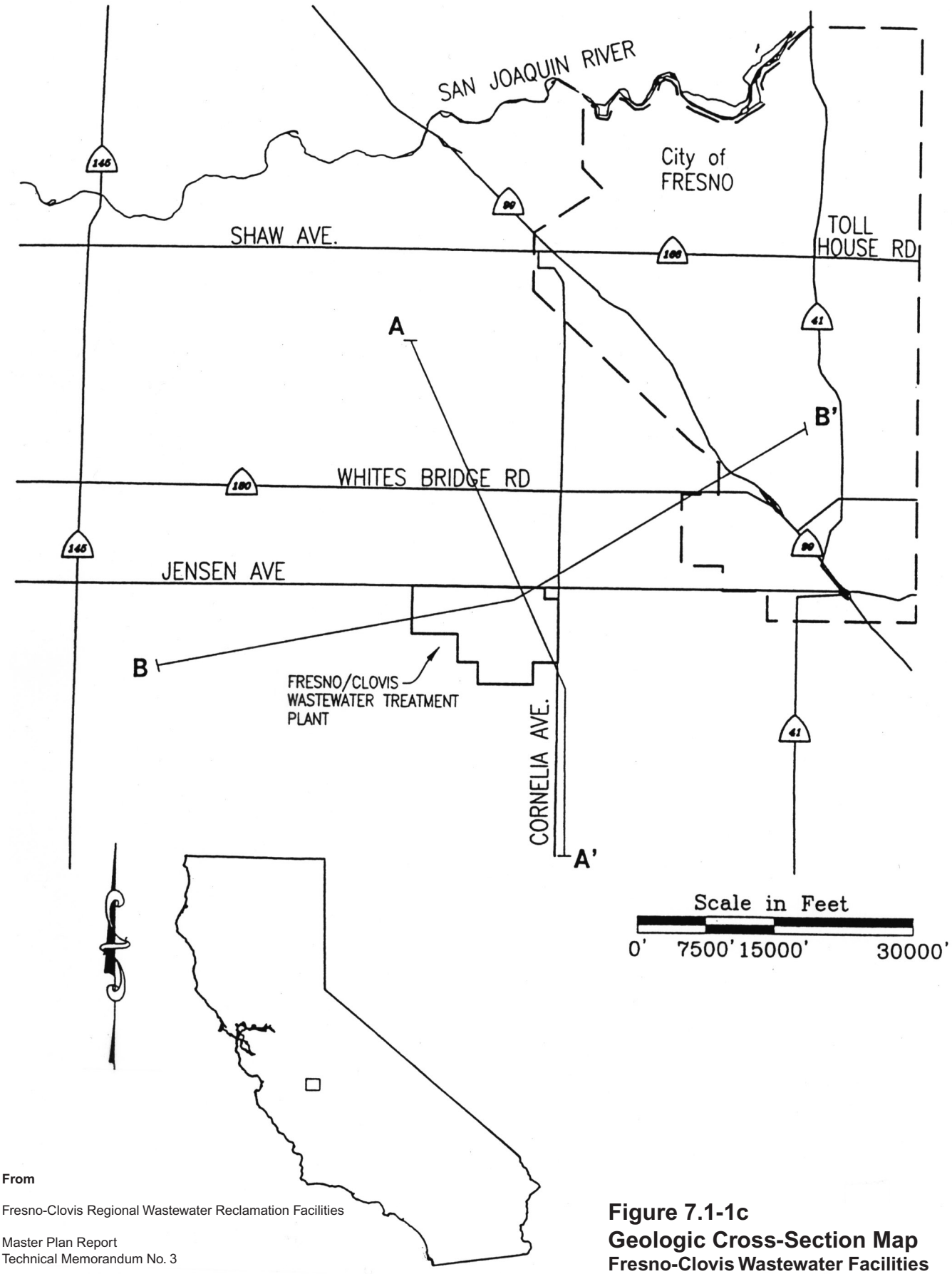
Scale in Feet

0' 2500' 5000' 10000'

Figure 7.1-1b
Groundwater Surface Elevation Contours
Shallow Zone, Fourth Quarter 1998

From

The City of Fresno



From

Fresno-Clovis Regional Wastewater Reclamation Facilities

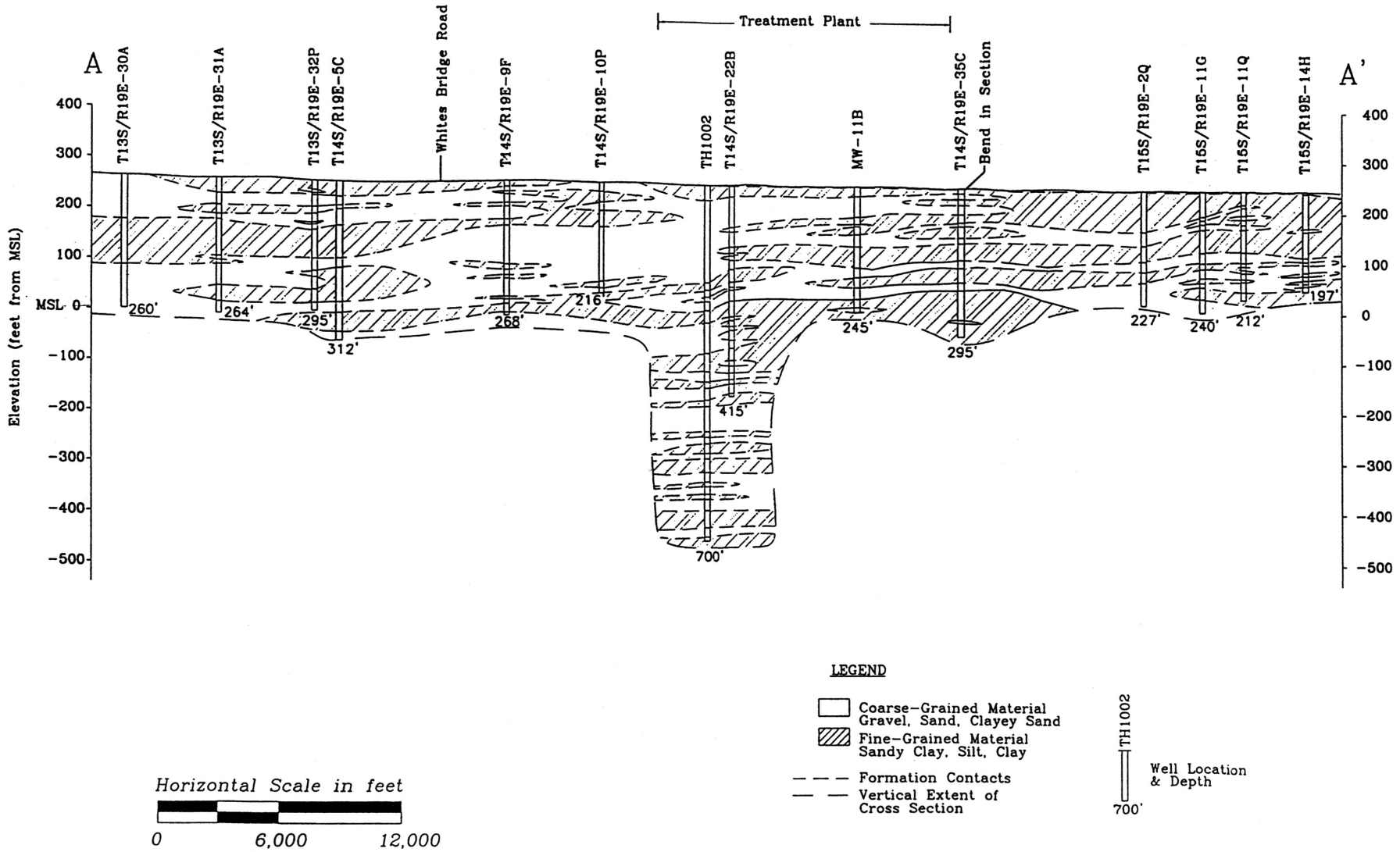
Master Plan Report
Technical Memorandum No. 3

Prepared by Ludhorff and Scalmanini for Carollo Engineers

August 1996

Figure 7.1-1c
Geologic Cross-Section Map
Fresno-Clovis Wastewater Facilities
Master Plan Report

CH2MHILL



From

Fresno-Clovis Regional Wastewater Reclamation Facilities

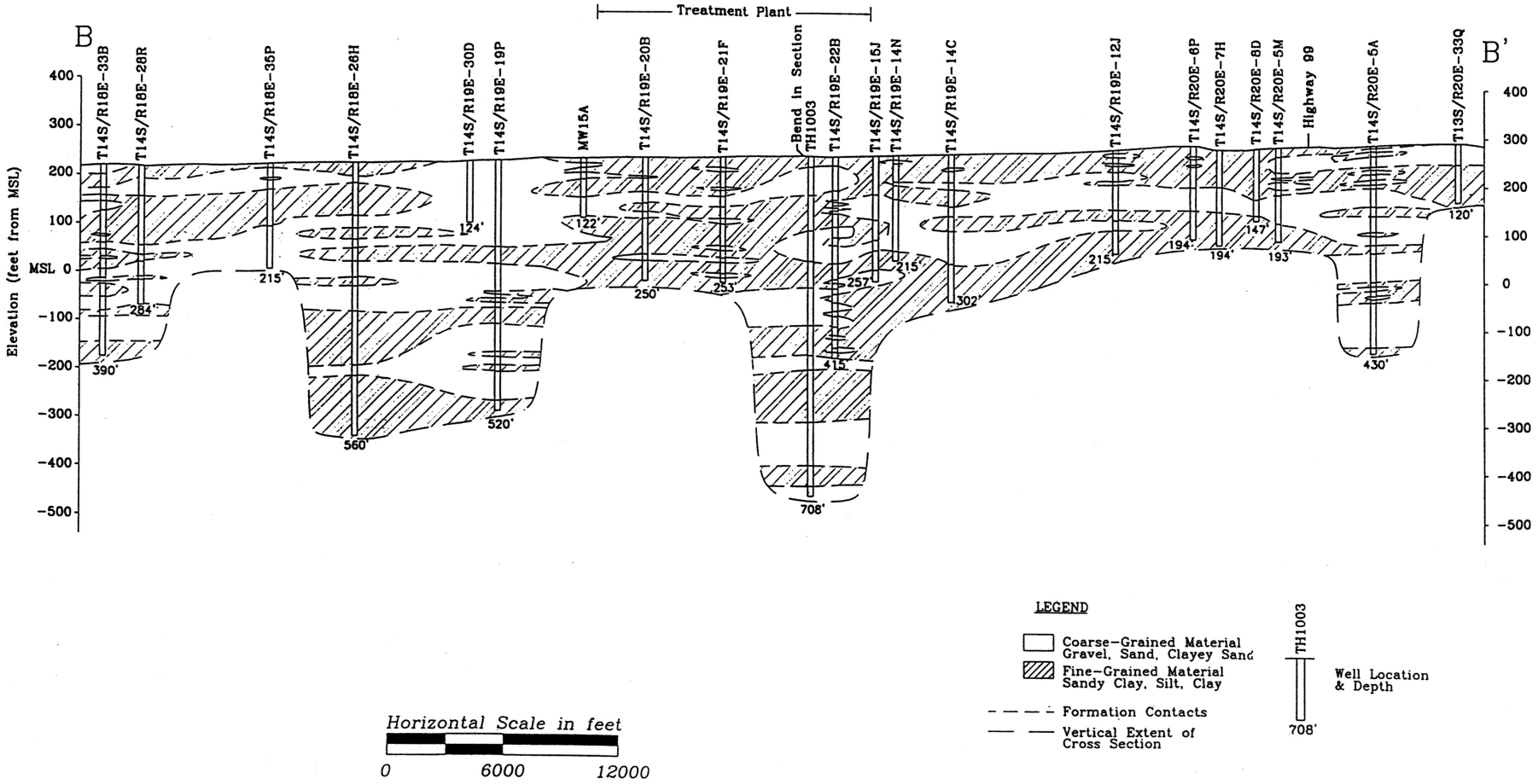
Master Plan Report
Technical Memorandum No. 3

Prepared by Ludhorff and Scalmanini for Carollo Engineers

August 1996

Figure 7.1-1d
Geologic Cross Section A-A'
Fresno-Clovis Wastewater Facilities
Master Plan Report

CH2MHILL



From

Fresno-Clovis Regional Wastewater Reclamation Facilities

Master Plan Report
Technical Memorandum No. 3

Prepared by Ludhorff and Scalmanini for Carollo Engineers

August 1996

Figure 7.1-1e
Geologic Cross Section B-B'
Fresno-Clovis Wastewater Facilities
Master Plan Report

CH2MHILL

FIGURE 8.14-3a
100-YEAR FLOOD ZONES
CENTRAL VALLEY ENERGY CENTER
APPLICATION FOR CERTIFICATION

CH2MHILL

FRESNO-CLOVIS
WWTF

Fresno Slough

James Bypass

Manning Ave

Springfield Ave

LEGEND

100 - YEAR FLOOD ZONE

PROJECT SITE

PROPOSED GAS LINE ALIGNMENT

PROPOSED WATER LINE ALIGNMENT

WATER

ROADS

SOURCE: FEMA, 1993

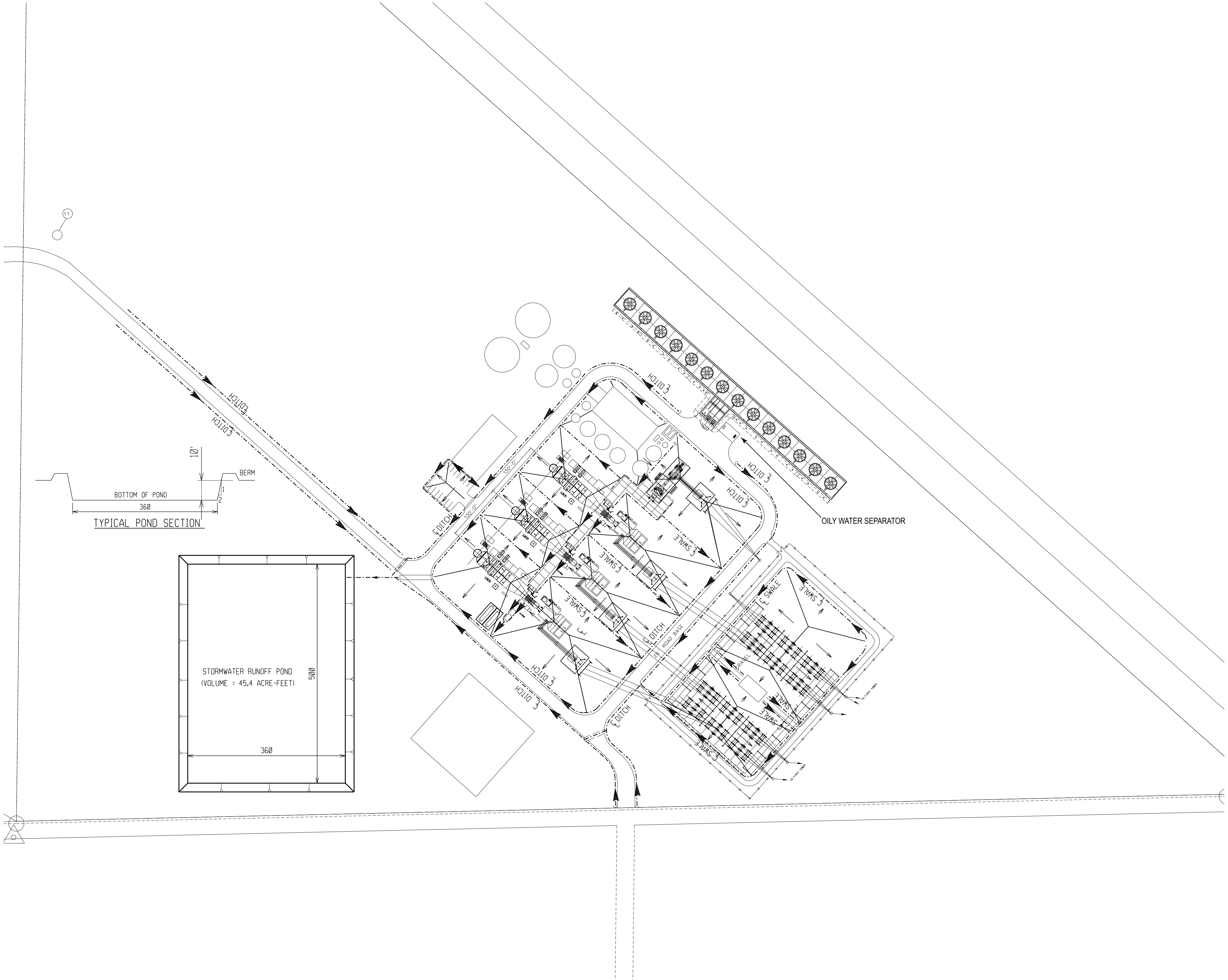
1 0 1 Miles

SCALE IS APPROXIMATE

N

FIGURE 8.14-3b
100-YEAR FLOOD ZONES
CENTRAL VALLEY ENERGY CENTER
APPLICATION FOR CERTIFICATION

CH2MHILL



LEGEND

FLOW DIRECTION

FIGURE 8.14-4R
CVEC PROPOSED
DRAINAGE FACILITIES
CENTRAL VALLEY ENERGY CENTER
APPLICATION FOR CERTIFICATION

CH2MHILL

E122001004SAC cvec drainage exhibit 001.ai 12/7/01 emilne

Attachment 12-WR-2

CVRWQCB 21 November letter

[Insert file: Attach 12-WR-2]

California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

Fresno Branch Office
Internet Address: http://www.swrcb.ca.gov/~rwqcb5
3614 East Ashlan Avenue, Fresno, California 93726
Phone (559) 445-5116 • FAX (559) 445-5910

21 November 2001

Mr. Stephen Hogg, Manager
Fresno-Clovis WWTF
5607 W. Jensen Ave.
Fresno, CA 93706

REPORT OF WATER RECYCLING, CITIES OF FRESNO/CLOVIS WWTF, CENTRAL VALLEY ENERGY CENTER RECYCLING PROJECT, FRESNO COUNTY

We have reviewed your Report of Water Recycling (RWR), dated 17 October 2001, in support of a project to recycle groundwater extracted from shallow wells situated amidst the effluent percolation ponds at the Cities of Fresno and Clovis Wastewater Treatment Facility (WWTF). The RWR states that extracted groundwater will be disinfected prior to use for cooling water in the proposed Central Valley Energy Center near the City of San Joaquin. The disinfected extracted groundwater meets the level of quality necessary for use of recycled water for cooling in accordance with Title 22, California Code of Regulations, sections 60301.230 and 60306 et seq. (hereafter Title 22).

Regional Board Resolution No. 77-69 delegates authority to the Executive Officer to waive water recycling requirements provided the following conditions are met:

1. The recycling of wastewater will comply with any applicable criteria provided by Title 22.
2. The proposed use receives prior approval from the state and local health department and Executive Officer, and
3. The proposed use is for one year or less in duration.

Pursuant to Board Resolution No. 77-69, water recycling requirements are waived until **20 November 2002** provided you comply with the above conditions. Effective January 2003, Senate Bill 390 will terminate Resolution No. 77-69 so that it is imperative that Water Reclamation Requirements be adopted.

Next month we will distribute for public comment tentative waste discharge requirements for the Cities of Fresno/Clovis that will serve as a Master Reclamation Permit. Once adopted by the Board, the Master Reclamation Permit will enable the Cities of Fresno/Clovis to regulate the recycling of WWTF effluent either directly or as extracted shallow groundwater, as in the case of Central Valley Energy Center recycling project.

If you have any questions regarding this matter, please contact Barry Hilton at (559) 445-5455.

for GARY M. CARLTON
Executive Officer

cc: Mr. Jim Kassel, State Water Resources Control Board, Sacramento
Mr. Carl Carlucci, California Department of Health Services, Fresno
Mr. Matt Trask, California Energy Commission, Sacramento
Fresno County Department of Environmental Health, Fresno
Mr. Mike Argentine, Calpine, Pleasanton
Mr. Joe Crea, Aspen Environmental Group, Sacramento
Mr. Steve DeCou, CH2M Hill, Sacramento

blh\Dischargers\Fresno County\City of Fresno\Reclamation\CVEC Waiver 1 jlk
N15/A/Fresno, City of/Master Reclamation Permit/5C10NC00028

Attachment 12-WR-7

DHS and City of Fresno Letters

[Files: Attach 12-WR-7DHS.pdf & Attach 12-WR-7Fresno.pdf]

DEPARTMENT OF HEALTH SERVICES
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS
1040 E. HERNDON AVENUE, SUITE 205
FRESNO, CALIFORNIA 93720-3158
(559) 447-3300
FAX (559) 447-3304

October 17, 2001

Mr. Steven W. DeCou, P.E.
CH2M Hill
2485 Natomas Park Drive, Suite 6000
Sacramento, CA 95833

Dear Mr. DeCou:

Draft Title 22 Engineering Report for City of Fresno/Calpine CVEC Recycled Water Proposal, Fresno County

We have reviewed the above cited draft report (dated August 22, 2001) for the reclamation of pumped recharge water from the Fresno Clovis Regional wastewater treatment plant (WWTP) effluent disposal area to the CVEC site to be located in the City of San Joaquin. Calpine is proposing to construct six extraction wells within the WWTP's effluent disposal area, install a sodium hypochlorite treatment system, and construct a 20.5 mile, 30" diameter recycled water transmission pipeline to the use site in the City of San Joaquin. The recycled water will be used for cooling, makeup water and for fogging the combustion turbine inlet air. The Engineering report was submitted in accordance with the requirements of Title 22, Water Recycling Criteria. We have the following comments:

1. The draft Title 22 report stated that an additional report would be submitted to address the "in-plant" issues such as cross-connection issues and maintenance of a chlorine residual at the use site. This supplemental report must be submitted at the time the plans are developed for the use site to ensure that all concerns are addressed prior to construction.

2. Section 2.7, Sodium Hypochlorite Feed System - The report discusses the provision of eyewash and shower facilities at the chlorine solution storage and use site. It was agreed that potable water must be used for these facilities at the WWTP site, and could be provided by the use of hauled water to a suitably sized tank. The operations plan must identify a routine frequency for changing out the water volume.

3. Section 2.7, Recycled Water Transmission Pipeline - The final report must include more detailed maps of the pipeline alignment. The report must identify the location of all potable water lines and sewer lines within 50 feet of the

pipeline and the location of all domestic water wells, both public and private, within 100' of the pipeline along its alignment.

4. Section 2.8, Plant Reliability Features - The treatment plant reliability features proposed to comply with Sections 60333-60355 of the Water Recycling Criteria should be described in detail. The discussion of each reliability feature should state under what conditions it will be actuated. When alarms are used to indicate system failure, the report should state where the alarm will be received, how the location is staffed and who will be notified. The report should also state the hours that the plant will be staffed, and the number of staff. In addition, the report should identify the availability of standby chlorinators (at each site - WWTP and use site) and spare parts, where they will be stored and frequency of operation of the standby unit to ensure operation during an emergency.

5. Section 2.10, Monitoring and Reporting - The report should describe the planned monitoring and reporting program, including all monitoring required by the Water Recycling Criteria, and include the frequency and location of sampling. Not included in the report is the need to perform daily total coliform monitoring and daily CT compliance determinations. In addition, the method and frequency of calibration of the continuous chlorine residual and turbidity monitoring and recording equipment must be identified.

6. Section 2.11, Contingency Plan - The report must identify measures to be taken to prevent inadequately treated/disinfected recycled water from being delivered to the use site. The contingency plan should include the following items that were not provided in the draft report:

   - A list of conditions which would require an immediate diversion to take place;
   - A description of the diversion procedures;
   - A description of the diversion area including capacity, holding time and return capabilities;
   - A plan for notifying the recycled water user, the regional board, the state and local health departments, and other agencies as appropriate, of any treatment failures that could result in the delivery of inadequately treated/disinfected recycled water to the use area.

It is anticipated that the supplemental report describing the in-plant practices will better address employee training, including who will provide the training, the frequency of training, and any written manuals that will be used in training.

Please be advised that the Fresno Clovis Regional WWTP will be billed for the time that is spent by the Department to recover its costs of conducting the review of this engineering report. If you have any questions regarding these comments, please contact me at (559) 447-3300.

Sincerely,

Betsy S. Lichti, P.E.
Senior Sanitary Engineer
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

BSL/bl
01L09BSL06.doc

cc: Rich Haberman, Chief, Central California Section, SCDWFOB
Carl Carlucci, Senior Sanitary Engineer, Merced District
Rick Sakaji, Technical Operations Section
Jeff Stone, Chief, Recycled Water Unit
JoAnne Kipps, Central Valley RWQCB
Stephen A. Hogg, City of Fresno

City of
FRESNO

Department of Public Utilities
Wastewater Management Division
5607 West Jensen Avenue • Fresno, California 93706-9458
(559) 498-1707 FAX (559) 498-1700
www.ci.fresno.ca.us

October 23, 2001

FILE

Jo Anne Kipps, P.E.
Senior Water Resource Control Engineer
California Regional Water Quality Control Board
Central Valley Region
3614 East Ashlan Avenue
Fresno, CA 93726

Subject: Draft Engineering Report for City of Fresno/Calpine CVEC Reclaimed Water Proposal - Response to DHS Review Comments

Dear Ms. Kipps:

We are in receipt of a California Department of Health Services (DHS) letter dated October 17, 2001 which provides comments from DHS' review of the subject report. A copy of the letter is attached. DHS comments on the draft report were received after the final *Engineer's Report for the Production, Distribution, and Use of Reclaimed Groundwater* was prepared and submitted to your agency, and therefore, certain revisions that are requested by DHS were not incorporated into the final report (dated October 12, 2001). We have attached a table to this letter that responds to the DHS comments and revises the final report. In addition to the DHS comments, we have found an error in Figure 2-3 of the report, and have attached Figure 2-3 (revised) that should be inserted in place of the original figure.

As noted in our response to comments, we have, in some cases requested that the required information be provided in a subsequently developed operations plan. The intent would be to initially gain approval of the general concept developed in the Engineer's Report, with the understanding that other (minor) details of the operation will be submitted prior to operation of the facilities. The submittal of an operations manual or plan is anticipated, but the details of that plan have not all been developed at this time. This sequential development of information is intended to provide a comprehensive understanding of the proposed facilities during this initial submittal and approval phase. If we have not met this expectation, we will aggressively move to provide any additional information as quickly as possible.

Post-it® Fax Note 7671	Date 11/01/01	# of pages ▶ 5
To Tom Price	From Steve Hogg	
Co./Dept. FAX	Co. Wastewater	
Phone # (916) 920-8463	Phone # (559) 498-1707	
Fax # (916) 314-3463	Fax # (559) 498-1700	

We trust that this letter and the attached addendum provide the information required to grant general approval of the proposed project. We request that the Regional Water Quality Control Board, as the lead reviewing agency, provide formal copies of this letter and attached addendum to the October 12 report to the Department of Health Services. As noted in the response to comments, we intend to provide additional information on the reclaimed water pipeline and nearby utilities in the next two weeks.

If you have any questions or comments, please contact me at your convenience.

Sincerely,

City of Fresno

Stephen A. Hogg
Wastewater Manager

c: Betsy S. Lichti/DHS
Steven W. DeCou/CH2M HILL

RESPONSE TO DHS REVIEW COMMENTS ON DRAFT ENGINEER'S REPORT FOR PROPOSED CVEC PROJECT–ADDENDUM TO OCTOBER 12, 2001 REPORT

DHS Comment No.	Engineer's Response	Action to be Taken
1	As noted on page 1, Section 1 of the October 12 report, a supplemental report addressing "in-plant" issues will be submitted in accordance with the DHS request.	Supplemental report on cross connection controls, etc. to be submitted after commencement of the design of the CVEC facility, and prior to its construction.
2	As noted on page 22 of the October 12 Engineer's Report, the Applicant has proposed to use emergency eyewash bottles at the sodium hypochlorite feed system, with emergency showers using the chlorinated product water that will be sent to the CVEC site. Given the DHS comment, an alternative is to use potable water for shower facilities (portable eyewash containers will be retained). The proposed frequency water changes is quarterly, with monthly additions of biocide. Details of this operation will be included in an operations plan to be submitted before final approval for operation of the facilities.	No potable water supplies are in the area of the proposed sodium hypochlorite facilities, and the October 12 Engineer's Report suggests the use of a water suitable for body-contact. If DHS objects to this use, then potable water will be trucked to the site for use. The October 12 Engineer's Report is hereby amended to allow for the use of potable water for showers in the event that DHS does not approve the use of disinfected reclaimed water.
3	DHS has requested additional details on the reclaimed water pipeline. Given the 20.5 mile length of the pipeline all of the requested information is not yet compiled.	Additional details for potable water pipelines, sewer pipelines, and domestic water wells will be provided as a separate submittal within the next two weeks. It is believed that this submittal date should not compromise the review schedule of the report, given the nature of this supplemental information.
4	It is understood that details of the plant reliability features must be reviewed and approved by DHS. However, these details will not be fully developed until detailed design is well underway. The purpose of the report is to gain general concurrence of the proposed project from the RWQCB and DHS, with details to be provided in the subsequent design effort and operations plan that will be submitted for final approval.	The October 12 Engineer's Report includes some general discussion of the reliability features that were not in the draft report. Additional details will be provided in the final operations plan submittal. It is not intended that the plant be staffed on a full-time basis. Telemetry will allow for off-site control to be exercised. It is expected that the DHS approval will require the submittal of a final operations plan for these procedures.

RESPONSE TO DHS REVIEW COMMENTS ON DRAFT ENGINEER'S REPORT FOR PROPOSED CVEC PROJECT—ADDENDUM TO OCTOBER 12, 2001 REPORT

DHS Comment No.	Engineer's Response	Action to be Taken
5	DHS has noted that daily total coliform monitoring and daily CT compliance determinations are required. It is proposed that test methods and frequency for sampling be determined during development of the operations plan. The Applicant accepts these conditions, and anticipates that the actual monitoring and reporting requirements will be included in the Regional Water Quality Control Board's Waste Discharge Requirements for the project.	This letter is intended to amend the October 12 report to indicate that daily total coliform monitoring and daily CT compliance determinations will be made.
6	DHS has requested additional detail regarding the contingency plan. Many of the comments have been addressed in the final report. The diversion of water is not expected to be required since the only two conditions that may require diversion would be 1) the delivery of reclaimed water with a turbidity that exceeds the regulatory requirements or 2) inadequate CT values. With respect to turbidity, there will be composite and individual well turbidimeters installed. The individual well-mounted turbidimeters will automatically shut down a well that exceeds the turbidity standards. Given the turbidity testing that was conducted and is included in the October 12 report, it does not appear that turbidity exceedances will be an issue, particularly with multiple wells in service (and if it is an issue, the automatic well shut-down will prevent the need for a diversion). With respect to CT values, there is a secondary chemical feed system at the CVEC site, and in the event that both the primary and secondary systems fail, then manual addition of hypochlorite would occur at the on-site storage tanks (this procedure is discussed in the final report). Therefore, there is an extremely limited possibility that any water will be delivered to the cooling towers at the CVEC site that does meet the treatment requirements.	Notification procedures will be included in the subsequent operations plan submittal.

Attachment 6-WR-3

Letter from Gary Horn
[File: Attach 6-WR-3.tif]

Yamabe & Horn Engineering, Inc.

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December 7, 2001

Tom Lagerquist
Peregrine Environmental
1000 River rock Drive, Suite 117
Folsom, CA 95630

RE: City of San Joaquin Wastewater Treatment Facility

Dear Tom,

The City of San Joaquin Wastewater Treatment Facility is permitted to treat and dispose of 0.252 million gallons per day (mgd) of effluent. In the past year the plant has recorded flows on peak days of 0.300 mgd. The current limitation at the plant is disposal of treated effluent. The City has an additional disposal pond that has been excavated, but never permitted, which will provide additional disposal capacity. Construction will involve piping for the new pond. In addition, the City has negotiated with an adjacent landowner to receive treated effluent to use to irrigate 80 acres of cotton.

The City has retained a consultant to provide the necessary technical reports to increase the capacity of the facility. The first draft of the report will be ready for review by City Staff next week. We do not believe there are any environmental constraints or uncertainties which would prevent the improvements from being made. We anticipate that the necessary permits will be issued early next year and the construction work will be complete by September 2002. The additional capacity will be more than adequate to serve the 40 workers at the Central Valley Energy Center.

Please contact our office if you have any questions, or need additional information.

Sincerely,

Gary D. Horn

Gary D. Horn, P.E.
San Joaquin City Engineer

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